

ABSTRACT

The present invention relates to a repeater for positioning mobile station and a method thereof. The repeater according to the present invention is implemented through adding a cell identifier generator module to the downlink circuit structure of a conventional repeater; said cell identifier generator module comprises: a synchronization searching unit designed to search for base station synchronization signal, a time delay unit designed to generate a fixed delay between start time of cell identifier signal frame and start time of base station pilot signal frame, and a cell identifier signal generating unit designed to generate cell identifier signal code word. The mobile station positioning method determines the mobile station is in the coverage of the repeater on the basis that the time difference between base station pilot signal and cell identifier signal is consistent to the fixed delay; then the method utilizes TOA measuring function to determine the distance from the mobile station to the repeater; thus it improves positioning accuracy of mobile stations in the coverage of the repeater. The repeater for positioning mobile station is easy to implement and can meet the positioning requirement of a plurality of mobile stations in the coverage of the repeater.